UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/685,136	10/14/2003	Joseph B. Rowlands	BP3247	4505

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EXAMINER
NGUYEN, TANH Q

ART UNIT	PAPER NUMBER
2182	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>*23 June 2009 (RCE)*</u>.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3,6,7,10,12,15 and 16* is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1,3,6,7,10,12,15 and 16* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on <u>*14 October 2003*</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All   b)☐ Some * c)☐ None of:
        1.☐ Certified copies of the priority documents have been received.
        2.☐ Certified copies of the priority documents have been received in Application No. _____ .
        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____ .

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5)☐ Notice of Informal Patent Application
6)☐ Other: _____ .

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1.   A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

application is eligible for continued examination under 37 CFR 1.114, and the fee set

forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June

23, 2009 has been entered.

Claim Objections

2.   Claim1, 10 are objected to because of the following informalities:

"converts the packet as an uncacheable data access request" in lines 15-16 of

claim 1 should be replaced with --converts the packet *to* an uncacheable data access

request-- for clarity

"converting the packet...as an uncacheable data access request" in lines 14-15 of

claim 10 should be replaced with --converting the packet...*to* an uncacheable data

access request-- for clarity

Claim Rejections - 35 USC § 112

3.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

4.   Claims 1, 3, 6, 7, 10, 12, 15, 16 are rejected under 35 U.S.C. 112, second

paragraph, as being indefinite for failing to particularly point out and distinctly claim the

subject matter which applicant regards as the invention.

Claim 1 recites "the memory" in line 7, "the memory" in line 14; claim 3 recites

"the memory" in line 3. It is not clear whether "the memory" in each instance refers to

the "memory that is local to the first node" recited in lines 4-5 of claim 1, or the "local

and remote memory" recited in line 6 of claim 1. Clarification is required.

Claim 7 recites "wherein a payload and a flag are written when following the

producer-consumer protocol" in lines 2-3. It is not clear where the payload and the flag

are written to. Clarification is required.

Claim 10 recites "identifying in the second node that the memory to be accessed

is located in a remote node" in lines 12-13. The recitation does not require the remote

node being first node. Note that while the first node is remote from the second node,

another node is also remote from the second node. Clarification is required.

Claim 12 recites 'the memory" in line 3. It is not clear whether "the memory"

refers to the "local memory of a first data processing system" recited in lines 3-4 of claim

10, the "local and remote memory" recited in line 5 of claim 10, or "the memory...located

in a remote node" recited in lines 12-13 of claim 10. Clarification is required

Claim 16 recites "wherein a payload and a flag are written when following the

producer-consumer protocol" in lines 2-3. It is not clear where the payload and the flag

are written to. Clarification is required.

5.   The rejections that follow are based on the examiner's best interpretation of the

claims.

Claim Rejections - 35 USC § 102

6.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7.   Claims 1, 3, 6, 7, 10, 12, 15-16 are rejected under 35 U.S.C. 102(b) as being

anticipated by Keller et al. (US 6,167,492).

8.   <u>As per claim 1</u>, Keller teaches a system (10, FIG. 1) for managing coherent data

access through multiple nodes (12A-12D, FIG. 1), comprising:

a first data processing system forming a first node (e.g. 12B – FIG. 1), in which

the first data processing system includes a first bridge (col. 4, line 57-58), a first

interface (e.g. 18E, FIG. 1) and a memory (14B – FIG. 1) that is local to the first node,

wherein the first node supports packet traffic for transfer of packets (col. 4, lines 13-25),

coherent traffic to access local and remote memory (col. 4, lines 13-18; col. 2, lines 15-

17; col. 4, line 67-col. 5, line 10) and non-coherent traffic to communicate with

input/output (I/O) circuitry (col. 3, lines 62-66; col. 4, lines 18-25), in which the memory

stores cacheable data having coherency (col. 5, lines 4-10); and

a second data processing system forming a second node (e.g. 12D – FIG. 1) that

supports packet traffic (col. 4, lines 13-25), coherent traffic (col. 4, lines 13-18; col. 2,

lines 15-17; col. 4, line 67-col. 5, line 10) and non-coherent traffic (col. 3, lines 62-66;

col. 4, lines 18-25), in which the second data processing system includes a second

bridge (col. 4, line 57-58) and a second interface (18K – FIG. 1), the first and second

interfaces coupling the first node to the second node (24C, 24D - FIG. 1) for transfer of

packet traffic, coherent traffic, and non-coherent traffic (col. 4, lines 13-25; note that the

claim does not clearly require transfer of non-coherent traffic between the first node and

the second node; and that the second node is for transfer of packet traffic, coherent

traffic and non-coherent traffic), wherein when the second node receives a packet from

an external source that is to access a coherent fabric of the memory (col. 13, lines 62-

64; col. 14, lines 22-25; col. 5, lines 4-10), the second bridge identifies the first node as

a remote node and converts the packet to an uncacheable data access request to the

first node (col. 4, line 67-col. 5, line 4; col. 10, lines 50-51; col. 11, line 27-30) so that the

uncacheable data access request does not access a coherent fabric in the second node

(col. 4, line 67-col. 5, line 4), and when the first bridge receives the uncacheable data

access request, the first bridge identifies the uncacheable data access request as a

local access request to the memory in the first node and processes the uncacheable

data access request from the second node as a coherent data access request in the

first node to access the coherent fabric of the memory in the first node (col. 10, line 47-

col. 13, line 58).

9.   As per claims 3, 6-7, Keller teaches the uncacheable data access request

associated with the packet from the external source being a store or a write request to

access the memory (col. 11, line 27-30);

        the second node generating the uncacheable data access request for the first

node to write data to the memory in the first node, and the first node consuming the

uncacheable data access request (see rejection of claims 1 and 3 above) - hence the

uncacheable data access request following a producer-consumer protocol;

data written by the first bridge in accordance with the request generated by

second bridge comprising a payload and a flag (FIG. 4; col. 7, lines 38-61).

10.   As per claims 10, 12, 15-16, the claims generally correspond to claims 1, 3, 6, 7,

and are rejected on the same bases. Note that this set of claims does not even require

the limitation "the first and second interfaces coupling the first node to the second node

for transfer of packet traffic, coherent traffic, and non-coherent traffic" recited in claim 1.

Examiner's note: *Examiner has cited particular page, column and line number(s) in the*
references applied to the claims above for the convenience of the applicant. Although
the specified citations are representative of the teachings of the art and are applied to
specific limitations within the individual claim, other passages and figures may apply as
well. Applicant needs to consider the references in their entirety as potentially teaching
all or part of the claimed invention.
In the case of amending the claimed invention, Applicant is respectfully requested to
indicate the portion(s) of the specification which dictate(s) the structure relied on for
proper interpretation and verification of the metes and bounds of the claimed invention.

Double Patenting

11.   The nonstatutory double patenting rejection is based on a judicially created
doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the
unjustified or improper timewise extension of the "right to exclude" granted by a patent
and to prevent possible harassment by multiple assignees.   A nonstatutory
obviousness-type double patenting rejection is appropriate where the conflicting claims
are not identical, but at least one examined application claim is not patentably distinct
from the reference claim(s) because the examined application claim is either anticipated
by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140
F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29
USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir.
1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422
F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ

644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

12.   Claims 1, 3, 6, 7, 10, 12, 15, 16 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-6 of U.S. Patent No. 7,424,561. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1-6 of U.S. Patent No. 7,424,561 either anticipate or make obvious the claims of the current application. Note the specification teaches uncacheable transactions being treated as non-coherent transactions.

Response to Arguments

13.   Applicant's arguments with respect to the pending claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TANH Q. NGUYEN whose telephone number is (571)272-4154. The examiner can normally be reached on M-F (9:30AM-6:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, TARIQ HAFIZ can be reached on (571)272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/TANH Q. NGUYEN/
Primary Examiner, Art Unit 2182

TQN: July 3, 2009